

IN THE CLAIMS

Claims 1 to 51 (cancelled)

52. (previously presented) A vehicle comprising:

a vehicle housing;

a motor structured and located so that operation of the motor can drive the vehicle into motion;

a first battery having a first energy density;

a second battery having a second energy density, with the second energy density being greater than the first energy density; and

a first battery circuitry structured to electrically connect the first battery and the second battery in parallel so that there are no switch type electrical elements for opening and closing the parallel connection of the first battery circuitry; and

a second battery circuitry structured to electrically connect the first battery and second battery to the motor so that electrical energy from the first battery circuitry can drive the motor to drive the vehicle into motion.

53. (previously presented) The vehicle of claim 52 wherein the first battery circuitry comprises a fuse.

54. (currently amended) The vehicle of claim 52 wherein:

the motor comprises a regenerative braking system structured to provide electrical energy, from time to time, by operation of the motor; and

the second battery circuitry is further structured so that electrical energy from the regenerative braking system is received by the first battery circuitry to recharge at least the first battery and/or second battery.

55. (previously presented) A vehicle comprising:

a vehicle housing;

a motor structured and located so that operation of the motor can drive the vehicle into motion;

a first battery comprising n_1 first battery cells connected in series, where n_1 is an integer greater than 1, where each first battery cell has a full charge nominal voltage between a value between min_1 volts and max_1 volts, where a first battery full charge nominal voltage is in a range between $(n_1 * \text{min}_1)$ volts and $(n_1 * \text{max}_1)$ volts, and where the first battery and its constituent first battery cells have a first energy density;

a second battery comprising n_2 second battery cells connected in series, where n_2 is an integer greater than 1, where each second battery cell has a full charge nominal voltage between a value between min_2 volts and max_2 volts, where a second battery full charge nominal voltage is in a range between $(n_2 * \text{min}_2)$ volts and $(n_2 * \text{max}_2)$ volts, and where the second battery and its constituent second battery cells have a second energy density; and

battery circuitry structured to electrically connect the first battery, the second battery and the motor so that the first battery and/or second battery can supply electrical energy to drive the motor to drive the vehicle into motion;

wherein, the first energy density is greater than the second energy density and wherein the first battery full charge nominal voltage range and the second battery full charge nominal voltage range substantially overlap.

56. (previously presented) The vehicle of claim 55 wherein:

the motor comprises a regenerative braking system structured to provide electrical energy, from time to time, by operation of the motor; and

the battery circuitry is further structured so that electrical energy from the regenerative braking system is received by the first battery circuitry to recharge the first battery and/or second battery.

57. (new) A vehicle comprising:

a vehicle housing;

a motor structured and located so that operation of the motor can drive the vehicle into motion;

a first battery having a first energy density and first terminals;

a second battery having a second energy density and second terminals, with the second energy density being greater than the first energy density; and

a first battery circuitry structured to electrically connect the first battery and the second battery in so that a terminal voltage across the first terminals will remain in operation approximately equal to a terminal voltage across the second terminals in the same manner as if the terminals of the first battery and the second battery were connected by a closed parallel electrical connection; and

a second battery circuitry structured to electrically connect the first battery and second battery to the motor so that electrical energy from the first battery circuitry can drive the motor to drive the vehicle into motion.

58. (new) The vehicle of claim 57 wherein the first battery circuitry is further structured so that the first terminals are electrically connected in parallel to the second terminals by a parallel connection which remains closed during operation of the vehicle.